

## CLAIMS

I claim:

- 1 1. A transaction filtering system for allocating transactions among a plurality of business  
2 objects, the system comprising:  
3 storage configured to store generated allocation rules and to store transaction data  
4 associated with the plurality of transactions, each generated allocation rule  
5 being associated with at least one of the plurality of business objects and  
6 being generated using relationships between members of the plurality of  
7 business objects;  
8 a query engine configured to query the transaction data using the generated  
9 allocation rules; and  
10 an allocation manager configured to make one or more attempts to allocate a  
11 member of the plurality of transactions among the plurality of business  
12 objects.
- 1 2. The transaction filtering system of claim 1, wherein a member of the plurality of  
2 transactions is a sale and the query is configured to determine commission  
3 allocation.
- 1 3. The transaction filtering system of claim 1, wherein a member of the plurality of  
2 transactions is a purchase and the query is configured to determine cost allocation.
- 1 4. The transaction filtering system of claim 1, wherein a member of the plurality of  
2 transactions is unallocated after a first attempt at allocation.

1 5. The transaction filtering system of claim 1, wherein a member of the plurality of  
2 transactions is under-allocated after a first attempt at allocation.

1 6. The transaction filtering system of claim 1, wherein a member of the plurality of  
2 transactions is over-allocated after a first attempt at allocation.

1 7. The transaction filtering system of claim 1, wherein a second attempt at allocating the  
2 member of the plurality of transactions includes identifying a business object  
3 configured to manually determine the allocation.

1 8. A hierarchical data structure comprising:  
2 a root node;  
3 one or more intermediate nodes related to the root node;  
4 a leaf node;  
5 a first generated allocation rule associated with the leaf node and configured for  
6 use in determining allocation of transactions to a business object  
7 associated with the leaf node; and  
8 a second generated allocation rule associated with one of the one or more  
9 intermediate nodes and configured for use in determining a business object  
10 configured to manually determine the allocation of one of the transactions  
11 to a business object.

1 9. The hierarchical data structure of claim 8, wherein the business object configured to  
2 manually determine the allocation is a person.

1 10. The hierarchical data structure of claim 8, wherein the business object associated with  
2 the leaf node is an account.

1 11. The hierarchical data structure of claim 8, wherein the business object associated with  
2 the leaf node is a task.

1 12. A computing system for hierarchical transaction filtering, the computing system  
2 comprising:  
3 storage configured to store a hierarchical data structure, a first generated  
4 allocation rule, a second generated allocation rule, and transaction data;  
5 an allocation manager configured to track allocation of transactions represented  
6 by the transaction data; and  
7 a query engine configured to execute a first query on the transaction data using  
8 the first generated allocation rule and, responsive to the first query, to  
9 execute a second query on the transaction data using the second generated  
10 allocation rule.

1 13. The computing system of claim 12, wherein the hierarchical data structure is  
2 configured to represent relationships between business objects in an organization.

1 14. The computing system of claim 12, wherein the first generated allocation rule  
2 includes a predefined rule inherited from a parent node.

1 15. The computing system of claim 12, wherein the first generated allocation rule is  
2 produced by traversing the hierarchical data structure.

1 16. The computing system of claim 12, wherein the second query is configured to  
2 identify a business object having a management role with respect to a node of the  
3 hierarchical data structure.

1 17. The computing system of claim 12, further including a transaction source configured  
2 to generate the transaction data.

1 18. A transaction allocation output comprising:  
2 a first set of transactions selected using a first query, the first query based on an  
3 allocation rule generated using a hierarchical data structure and associated  
4 with a leaf node of the hierarchical data structure, at least one transaction  
5 of the first set of transactions including a transaction value;  
6 a second set of transactions whose allocation is determined by a business object,  
7 the business object being identified using a second query, at least one  
8 transaction of the second set of transactions including a transaction value;  
9 and  
10 a summation of the transaction values.

1 19. The transaction allocation output of claim 18, wherein the transaction allocation  
2 output includes data stored on a computer readable medium.

1 20. The transaction allocation output of claim 18, wherein the transaction allocation  
2 output includes digital data transferred through a communications channel  
3 between a computing system and a client.

1 21. The transaction allocation output of claim 18, wherein the second query is generated  
2 using the hierarchical data structure.

1 22. The transaction allocation output of claim 18, wherein the generated allocation rule  
2 includes a predefined rule associated with a node of the hierarchical data  
3 structure.

1 23. A method of determining allocation of one or more transactions, the method  
2 comprising:  
3 accessing a first allocation rule associated with one of a plurality of business  
4 objects represented by a hierarchical data structure;  
5 executing a first query on transaction data using a query engine, the first query  
6 being based on the first allocation rule, the transaction data characterizing  
7 the one or more transactions;  
8 accessing a second allocation rule associated with another of the plurality of  
9 business objects represented by the hierarchical data structure; and  
10 executing a second query on a subset of the transaction data using the query  
11 engine, the second query being based on the second allocation rule and  
12 identifying a business object for determining allocation of at least one of  
13 the one or more transactions.

1 24. The method of claim 23, wherein the business object determines allocation manually.

1 25. The method of claim 23, further including receiving the transaction data  
2 characterizing the one or more transactions from a transaction source.

1 26. The method of claim 23, further including allocating the one or more transactions  
2 responsive to the results of the queries.

1 27. The method of claim 23, wherein a subset of the transaction data is representative of a  
2 subset of the one or more transactions.

1 28. The method of claim 23, wherein a subset of the transaction data is representative of a  
2 subset of the one or more transactions, and the subset of the one or more  
3 transactions includes an under-allocated transaction.

1 29. The method of claim 23, wherein a subset of the transaction data is representative of a  
2 subset of the one or more transactions, and the subset of the one or more  
3 transactions includes an unallocated transaction.

1 30. The method of claim 23, wherein a subset of the transaction data is representative of a  
2 subset of the one or more transactions, and the subset of the one or more  
3 transactions includes an over-allocated transaction.

1 31. A method of generating a transaction allocation output, the method comprising:  
2 receiving a query result including one or more transactions, the query result  
3 generated using a query applied to a set of transactions, the query

4                   generated using a hierarchical data structure and the query associated with  
5                   a leaf node of the hierarchical data structure;  
6           determining transaction allocation of any of the one or more transactions that are  
7                   unallocated, under-allocated, or over-allocated;  
8           parsing each of the one or more transactions to determine a value of each of the  
9                   one or more transactions;  
10          summing the values determined by parsing each of the one or more transactions;  
11          and  
12          including the sum of the determined values in the transaction allocation output.

1   32. The method of claim 31, wherein the one or more transactions include a sales  
2          commission.

1   33. The method of claim 31, wherein the one or more transactions include a purchase  
2          cost.

1   34. The method of claim 31, wherein the one or more transactions include an inventory  
2          allocation.

1   35. The method of claim 31, wherein the one or more transactions include a resource  
2          allocation.

1   36. The method of claim 31, wherein determining transaction allocation of any of the one  
2          or more transactions that are unallocated, under-allocated, or over-allocated, is  
3          determining transaction allocation of an unallocated transaction.

1 37. The method of claim 31, wherein determining transaction allocation of any of the one  
2 or more transactions that are unallocated, under-allocated, or over-allocated, is  
3 determining transaction allocation of an under-allocated transaction.

1 38. A system for determining allocation of a plurality of transactions among a plurality of  
2 business objects, the system comprising:  
3 storage configured for storing transaction data characterizing the plurality of  
4 transactions;  
5 means for executing a plurality of queries on the stored transaction data, using a  
6 plurality of allocation rules, the queries configured to determine allocation  
7 of the plurality of transactions; and  
8 means for manually determining allocation of a subset of the plurality of  
9 transactions, the subset including unallocated, under-allocated or over-  
10 allocated transactions.

1 39. The system of claim 38, wherein the subset of the plurality of transactions is  
2 determined responsive to the results of the plurality of queries.

1 40. The system of claim 38, wherein the subset of the plurality of transactions includes  
2 unallocated transactions.

1 41. The system of claim 38, wherein the subset of the plurality of transactions includes  
2 over-allocated transactions.



1 42. The system of claim 38, wherein a member of the plurality of queries is configured to  
2 select transactions to be allocated to a member of the plurality of business objects.

1 43. A computer readable medium storing computer code for determining an allocation  
2 plan, the computer code comprising:  
3 a code segment for accessing a first allocation rule associated with one of a  
4 plurality of business objects represented by a hierarchical data structure;  
5 a code segment for executing a first query on transaction data using a query  
6 engine, the first query being based on the first allocation rule, the  
7 transaction data characterizing the one or more transactions;  
8 a code segment for accessing a second allocation rule associated with another of  
9 the plurality of business objects represented by the hierarchical data  
10 structure; and  
11 a code segment for executing a second query on a subset of the transaction data  
12 using the query engine, the second query being based on the second  
13 allocation rule and identifying a business object for determining allocation  
14 of at least one of the one or more transactions.